SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549



FORM 11-K/A AMENDMENT NO. 1



(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2003

OR

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[] TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the	transition	period from	to	

Commission File Number 1-13828

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

MEMC RETIREMENT SAVINGS PLAN

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

MEMC ELECTRONIC MATERIALS, INC.

501 PEARL DRIVE (CITY OF O'FALLON), ST. PETERS, MISSOURI

63376 (Zip Code)

(Address of principal executive offices)

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Definitions:			
Plan	_	MEMC Retirement Savings Plan	
Trustee		Putnam Investments	
ERISA	_	Employee Retirement Income Security Act of 1974	
Company	_	MEMC Electronic Materials, Inc.	
Plan Administrator		Margaret Stonum and Thomas Stiffler (through January 26, 2004)	



KPMG LLP Suite 900 10 South Broadway St. Louis, MO 63102-1761

Report of Independent Registered Public Accounting Firm

Plan Administrator
MEMC Retirement Savings Plan:

We have audited the accompanying statements of assets available for plan benefits of the MEMC Retirement Savings Plan (the Plan) as of and for the years ended December 31, 2003 and 2002, the related statements of changes in assets available for plan benefits for the years then ended, and the supplemental schedule referred to below. These financial statements and supplemental schedule are the responsibility of the Plan's administrator. Our responsibility is to express an opinion on these financial statements and supplemental schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets available for plan benefits of the MEMC Retirement Savings Plan as of December 31, 2003 and 2002, and changes in assets available for plan benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule is presented for the purpose of additional analysis and is not a required part of the basic financial statements, but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

KPMG LLP

St. Louis, Missouri June 4, 2004

Statements of Assets Available for Plan Benefits December 31, 2003 and 2002

	_	2003	2002
Assets:			
Investments at fair value:			
Money market funds	\$	704,265	1,165,972
Shares of registered investment companies		35,349,113	23,213,624
Common stock		11,477,341	11,348,110
Common/collective trusts		29,231,701	23,494,194
Loans to participants	_	5,192,883	4,652,586
Total investments at fair value		81,955,303	63,874,486
Investments at contract value:			
Value of investment in PRIMCO Stable Value Fund	_	33,215,230	31,130,754
Assets available for plan benefits	\$ _	115,170,533	95,005,240

See accompanying notes to financial statements.

Statements of Changes in Assets Available for Plan Benefits

Years ended December 31, 2003 and 2002

	_	2003	2002
Additions:			
Earnings (loss) from investments: Interest income Dividend income Net appreciation (depreciation) in fair value of investments	\$ -	1,725,485 700,897 16,550,596	1,935,746 667,558 (3,977,184)
Total income (loss) from investments	_	18,976,978	(1,373,880)
Contributions: Employer Participants Participant rollovers		4,470,460 6,609,150 82,067	2,459,126 5,324,773 13,006
Total contributions	_	11,161,677	7,796,905
Total additions		30,138,655	6,423,025
Deductions: Benefit payments to participants Administrative expenses	_	9,951,438 21,924	16,252,035 17,600
Total deductions		9,973,362	16,269,635
Net increase in assets available for plan benefits		20,165,293	(9,846,610)
Assets available for plan benefits: Beginning of year	_	95,005,240	104,851,850
End of year	\$ _	115,170,533	95,005,240

See accompanying notes to financial statements.

Notes to Financial Statements December 31, 2003 and 2002

(1) Description of the Plan

The following description of the Plan provides only general information. Participants should refer to the plan document for a more complete description of the Plan's provisions.

(a) General

The Plan was established on April 1, 1989 under the provisions of Section 401(k) of the Internal Revenue Code and is a defined contribution retirement savings plan, subject to the provisions of ERISA, sponsored by the Company. Generally, all employees of the Company compensated in U.S. dollars from a payroll location within the United States are eligible to participate in the Plan.

(b) Contributions

Each participant may elect to contribute from 1% to 50% of his/her covered compensation as described in the Plan on a before-tax basis. The before-tax contribution is limited to the amount specified by Section 402(g) of the Internal Revenue Code (\$12,000 and \$11,000 in 2003 and 2002, respectively). A participant is eligible to receive employer matching contributions of 100% of the first 3% of the employee's contribution, 50% of the next 2% contributed, and 20% of the next 1% contributed, up to 4.2% of the participant's covered compensation for the Plan year. Effective January 1, 2003, the Company began contributing 2% of compensation as a special employer contribution on behalf of those individuals who were frozen in the MEMC Pension Plan or hired on or after January 2, 2002.

(c) Participants' Accounts

Each participant account is comprised of the following subaccounts: a before-tax account, an after-tax account, a Safe Harbor matching account, a matching account, and a rollover account, as applicable. Participants may elect to participate and/or adjust contribution elections at any time. Each participant account is credited with participant contributions as specified by the participant; an allocation of the Company's contributions; and the income, loss, appreciation, and depreciation attributable thereto.

(d) Vesting

Participant matching accounts are immediately and fully vested.

(e) Investment Options

Participants may direct investment or reinvestment of contributions credited to his/her individual account in any one or a combination of the investment options in increments of 1% of the amount credited.

The following investment options were available:

Putnam International Growth Fund—Funds are invested in a diversified portfolio of stocks of companies located mainly outside the United States of America.

Notes to Financial Statements December 31, 2003 and 2002

Putnam Vista Fund—Funds are invested in a variety of stocks that have the potential for above-average growth, including those of widely traded larger companies; smaller, less well-known companies; and, currently, mostly midsize firms.

Putnam S&P 500 Index Fund—Funds are invested to seek a return, before the assessment of fees, that closely approximates the return of the S&P 500 Index, which is an indicator of U.S. stock market performance.

The George Putnam Fund of Boston—Funds are invested in a well-diversified portfolio composed mostly of stocks and corporate and U.S. Government bonds.

PIMCO Total Return Fund—Funds are invested in bonds that target intermediate-maturity, fixed-income securities from all major sectors of the bond market.

PRIMCO Stable Value Fund—Funds are invested in assets consisting of a number of investment contracts with a diversified, highly rated group of insurance companies, banks, and other financial institutions.

MEMC Stock Fund—Funds are invested in common stock of MEMC Electronic Materials, Inc.

RS Diversified Growth Fund—Funds are invested primarily in small- and mid-cap size companies. The fund's focus is to achieve long-term capital growth by creating a portfolio broadly diversified over industries and companies.

Putnam Voyager Fund—Funds are invested primarily in stock of large and midsize companies across a range of industries. The fund targets companies that are enjoying rising sales and profits and that are expected to grow over time.

Dodge and Cox Stock Fund—Funds are invested in a broadly diversified portfolio of common stocks. The fund's focus is long-term growth and principal and income.

DFA Small Cap Value Fund—Funds are invested in securities of small-cap companies located in the United States. The fund seeks growth of principal by focusing on companies that have a high book value in relation to their market value.

Participant directed – interfund transfers in and out of the MEMC Stock Fund are limited to one per calendar month. Participants may elect to adjust all other investment options daily.

(f) Loans to Participants

Participants may apply for and receive loans from their vested account. Generally, no more than two loans may be outstanding to a participant at any one time. The amount of loans to an individual participant shall not exceed the lesser of \$50,000 or one-half of the vested portion of the account balance of the participant as of the date the loan is requested by the participant without regard to any contributions allocated to the account of the participant on or after such date. The minimum amount of any loan shall be \$1,000.

Notes to Financial Statements December 31, 2003 and 2002

(g) Payment of Benefits

Under the terms of the Plan, participants or their designated beneficiaries are entitled to receive the amounts credited to their accounts upon normal retirement at age 65, early retirement, disability, or death. Participants terminating prior to retirement are entitled to receive that portion of their account that is vested. Distributions are made in the form of a lump-sum payment. If the participant's vested balance exceeds \$5,000, the participant may elect to defer receipt of the distribution.

For contributions made prior to January 1, 2001, a participant may elect an in-service withdrawal of any amount from the value of his/her rollover account, his/her after-tax contributions (except the company matched after-tax contributions within the last 24 months), or his/her vested matching contributions (except the matching contributions within the last 24 months). Before-tax contributions and earnings on those contributions may not be withdrawn.

A participant who has reached age 59½ may take a withdrawal from their employee and vested company amounts equal to the value of the account less contributions made during the previous 24 months.

In addition, hardship withdrawals are allowed for employees under age 59½ under certain circumstances in an amount equal to the value of accumulated before-tax contributions and the safe harbor match account. Account earnings are not eligible for inclusion in the withdrawal amount. Participants incurring a hardship withdrawal will not be eligible to make further contributions to the plan for at least 12 months after the receipt of such distribution.

(2) Summary of Accounting Policies

The following are the significant accounting policies followed by the Plan:

(a) Basis of Accounting

The accompanying financial statements have been prepared on the accrual basis of accounting, except for benefit payments, which are recorded when paid.

(b) Use of Estimates

The preparation of the accompanying financial statements in conformity with accounting principles generally accepted in the United States of America requires the Plan Administrator to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(c) Valuation of Investments

Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Investments are valued as follows:

• Investments in the stock fund and shares of a registered investment company are valued based on the fair value as determined by quoted market price on a daily basis.

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(Continued)

Notes to Financial Statements December 31, 2003 and 2002

- Investments in common/collective or pooled funds maintained by the Trustee are valued at the
 price furnished by the Trustee. The cost of securities sold is based on the average cost of all
 such securities held at the time of sale.
- The value in the loan fund represents the unpaid principal of employee loans. Loans to participants are valued at cost, which approximates fair value.
- Investments in the PRIMCO Stable Value Fund are valued at contract value as the contracts are fully benefit responsive. Contract value represents contributions made under the contract, plus interest at the contract rate, less funds used to pay for benefits. At December 31, 2003 and 2002, the contract value approximated the fair value. There are no reserves against contract value for credit risk of the contract issuer or otherwise. The average yield and crediting interest rates ranged from 4.12% to 5.96% in 2003 and 2.44% to 7.85% in 2002.

(d) Administrative Expenses

The reasonable expenses incident to the operation of this Plan shall be paid out of the trust fund, unless the Company, in its sole discretion, elects at any time to pay part or all of such expenses.

(3) Trust Fund Managed by the Trustee

The Plan assets are maintained in a trust fund. The investments, and changes therein, of this trust fund have been reported to the Plan by the Trustee.

(4) Plan Termination

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA.

(5) Tax Status

The Internal Revenue Service issued its latest determination letter on June 6, 2001, which stated that the Plan and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and, therefore, are exempt from Federal income taxes. The Plan has been amended since receiving the determination letter. However, the Plan Administrator and the Plan's counsel believe that the Plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code.

Notes to Financial Statements

December 31, 2003 and 2002

(6) Investments

The following table presents investments as of December 31, 2003 and 2002. Investments that represent 5% or more of the Plan's assets are separately identified.

	_	2003	2002
Investments, at fair value:			
The George Putnam Fund of Boston	\$	11,552,547	10,858,174
Putnam S&P 500 Index Fund		29,231,778	23,494,194
MEMC Electronic Materials, Inc. common stock		11,469,965	11,348,110
RS Diversified Growth Fund		8,661,503	3,647,280
Other	_	21,039,510	14,526,728
	_	81,955,303	63,874,486
Investments, at contract value:			
Bank of America NT & SA		5,122,953	7,426,201
Union Bank of Switzerland AG		5,980,830	3,096,268
JP Morgan Chase Bank		5,981,310	6,566,979
Other	_	16,130,137	14,041,306
	_	33,215,230	31,130,754
Total investments	\$_	115,170,533	95,005,240

Net Appreciation (Depreciation) in Fair Value

The Plan's investments (including investments bought, sold, and held during the year) appreciated in value by \$16,550,596 in 2003 and depreciated by \$3,977,184 in 2002, as follows:

	_	2003	2002
Investments at fair value as determined by quoted market price:			
Shares of registered investment companies	\$	6,085,003	(4,319,078)
Common/collective trusts		6,537,881	(7,149,989)
MEMC Electronic Materials, Inc. common stock		3,927,712	7,491,883
Net appreciation (depreciation) in fair value	\$	16,550,596	(3,977,184)

Notes to Financial Statements December 31, 2003 and 2002

(7) Related Party Transactions

Certain Plan investments are shares of mutual funds managed by Putnam Investments. Putnam Investments is the Trustee, as defined by the Plan, and, therefore, these transactions qualify as party-in-interest transactions. Fees paid by the Plan for the investment management services amounted to \$21,924 and \$17,600 for the years ended December 31, 2003 and 2002, respectively.

Schedule H, Line 4i – Schedule of Assets (Held at End of Year) December 31, 2003

Description of issue		Current value
PIMCO Total Return Fund	\$	4,820,752
The George Putnam Fund of Boston *		11,552,547
Putnam Vista Fund *		2,255,256
Putnam S&P 500 Index Fund *		29,231,778
Putnam International Growth Fund *		1,876,709
Putnam Voyager Fund *		1,339,425
DFA Small Cap Value Fund		1,931,212
RS Diversified Growth Fund		8,661,503
Dodge and Cox Stock Fund		2,911,633
MEMC Electronic Materials, Inc. common stock		11,469,965
John Hancock Mutual Life—#8313, 7.49%		1,384,195
Union Bank of Switzerland AG—6.44%		5,980,830
State Street Bank Short Term Bond		4,253,803
ING Life Insurance #60030-2.44%		4,432,485
Bank of America NT & SA—#01-131,4.76%		5,122,953
Monumental Life—#00100TR, 5.8%		5,188,894
JP Morgan Chase Bank—#441894ZA, 5.82%		5,981,310
Security Life of Denver—#SA0257, 5.67%		870,753
Participant loans, interest rates ranging from 4.8% to 9.5%		5,192,883
Putnam Institutional Management—Interest bearing cash		704,265
Pending	-	7,382
Total investments	\$	115,170,533

^{*} Represents party-in-interest allowable by ERISA

See accompanying independent auditors' report.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Employee Benefits Committee has duly caused this Amendment No. 1 to the annual report to be signed on its behalf by the undersigned hereunto duly authorized.

MEMC Retirement Savings Plan

Date: December 23, 2004

Sylvia Roberts-Toomer

Plan Administrator

EXHIBIT INDEX

Exhibit No. Description

Consent of KPMG LLP



Consent of Independent Registered Public Accounting Firm

Plan Administrator
MEMC Electronic Materials, Inc.:

We consent to the incorporation by reference in the registration statement (Nos. 333-19159) on Form S-8 of MEMC Electronic Materials, Inc. of our report dated June 4, 2004, with respect to the statements of assets available for the plan benefits of MEMC Retirement Savings Plan as of December 31, 2003 and 2002, the related statements of changes in assets available for plan benefits for each of the years then ended, and the related supplemental schedule as of December 31, 2003, which report appears in the 2003 Annual Report on Form 11-K/A of MEMC Retirement Savings Plan.

KPMG LLP

St. Louis, Missouri December 21, 2004